NATURE STILL PREFERS FLYING BOATS . . . .

Jan. 1939

By T. M. Hemphill

SOME time ago the author wrote "Nature Prefers Flying Boats" pointing out the fact that nature has generously dotted the country with lakes, rivers and reservoirs suitable for landing flying boats. At the time of the first writing, only those suitable water bodies below 38° latitude were shown. The accompanying map gives a more complete picture of the situation. Each circle shown indicates a body of water suitable for taking off or landing a large flying boat. All the suitable bodies of water are not shown. In some places they are so numerous, that the map would appear solid black if an attempt were made to indicate them all. Only the largest are shown in such cases. These are nature's seaport landing fields. Unfortunately, it appears to be a peculiar trait of men that they must do everything the hard way at least until competition with the elements or with other men forces them to take the natural course and we who build and fly aircraft are no exceptions. We are not going to take advantage of nature's seaports as long as we can exercise our skill and brawn providing airports even though in some instances our ingenuity is taxed to the limit to find a location which is at all suitable and practical.

As this country was developed at a time when transportation was still quite a problem our forefathers could not ignore nature's advantages and were of necessity forced to found their cities at points accessible by water. Consequently it is not surprising to find that our oldest and largest cities have fine harbors conveniently located to the heart of the town. People still do not go places where there isn't water, they can't. There must be at least a reservoir wherever there are any considerable number of people. Usually there are several large enough to land in. Why build airports?

Returning to the map, it is hard to pick a route across the country which does not have "seaports" as frequently spaced as the airline airports, and these seaports for the most part are free. How much easier it would have been from the beginning to have employed flying boats on the transcontinental routes with smaller flying boats serving as feeders. There is hardly a point on the whole map which could not easily be reached by water craft or at least by a combination of water craft and car. Even summer resorts of any consequence are usually located on lakes or secluded bodies of water, easily accessible by air. It can be said in general that where there are people there is also water.

If our airlines had developed around flying boats instead of land planes other problems which have arisen would not have done so. For example, our coastwise airlines fly over the ocean, at least over part of their routes. While this practice is safe enough because of the reserve of power carried, there is always the possibility, however remote, of having to land at the nearest convenient spot which would be the water's edge. Unfortunately this inviting spot is usually rough enough to make short work of any land plane.

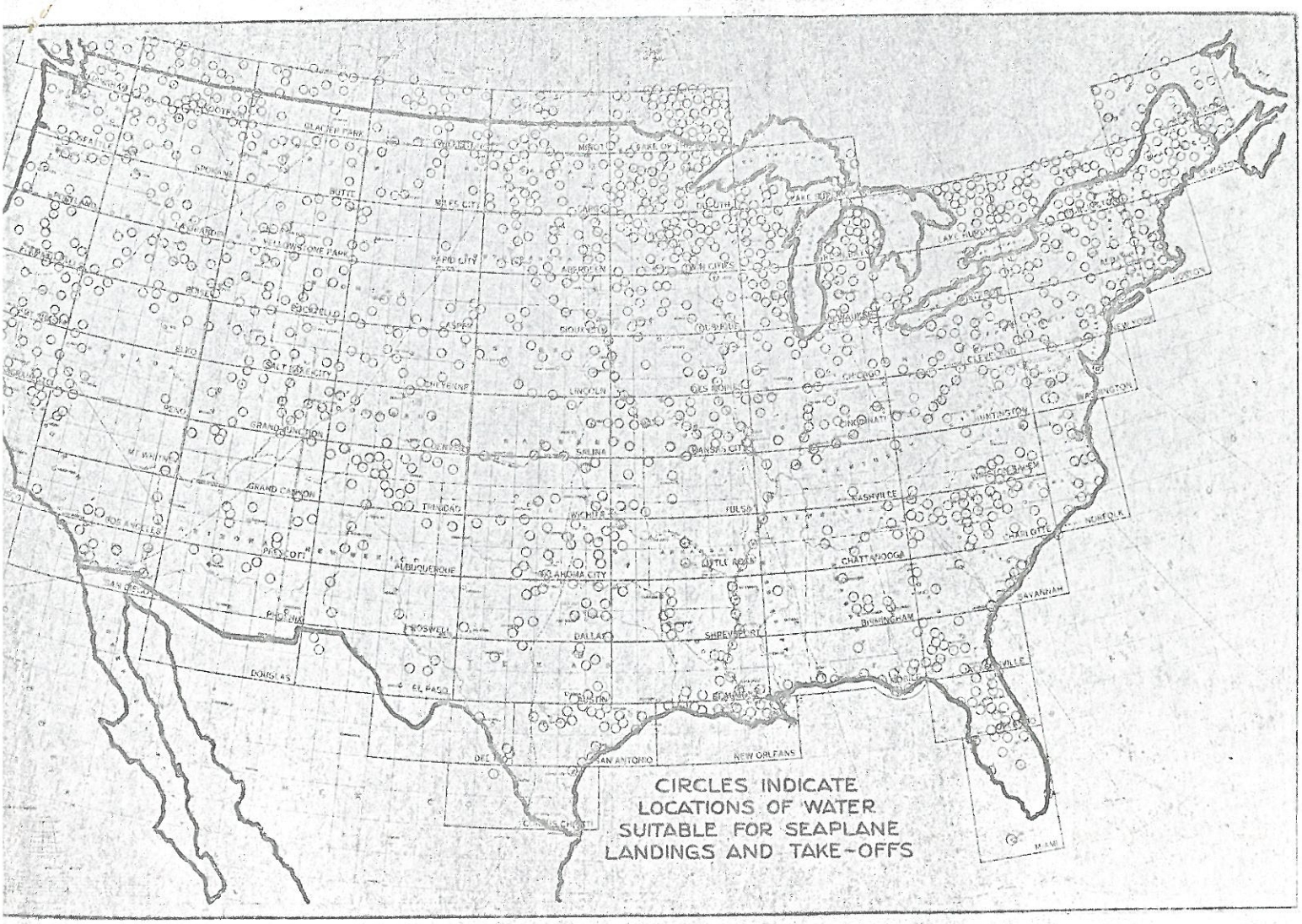
It might be supposed at first that seaplanes operating over land are in similar straits. However, this is not the case. In an extreme emergency, land planes will land on their belly with the wheels retracted because, by experience, this has proven to be the safer method. Flying boats are well suited to this type of landing since their hull bottom is designed to withstand landing shocks. In fact, seaplanes are more suited to emergency landing on land than landplanes are because the part that is designed for landing (the hull bottom) takes the shock. The wings, tail, propellers and other parts which must be designed to clear the water, will also clear the ground and small protuberances in an emergency landing on land. Consequently, these parts will not catch and cause the ship to careen around into some unfavorable or destructive attitude. This is not the case with a landplane with its landing gear retracted, when the clearances becomes less for the emergency landing.

There have already been several instances of flying boats making forced landings on land and in no such case, to the author's knowledge, has there been a serious injury. A *Consolidated* Commodore operated by Pan American Airways was forced to land in a clearing in Cuba. No one was injured. The story goes that one of the passengers riding in a Commodore at a later date accosted the pilot and related his part in the event. The pilot remarked that it was quite a coincidence for said he, "I was the pilot of that ship," "and," he said after a pause "This is the ship."

A Navy patrol boat was recently landed on a beach in San Diego with no one injured. And even more recently, an amphibian landed at the Glendale airport with wheels up, "without a scratch." The intentional daily landings and take-offs of the Cub seaplane on the grass airport at the Cleveland Air Races also bears witness to the fact that the procedure is not unduly hazardous.

The realization that flying boats overland is not hazardous cannot help but become more widespread when Uncle Sam's newest and fastest Dreadnaught of the Air, the *Consolidated* XPB2Y-1 is on short notice ordered to proceed across the United States from San Diego to Anacostia. The return flight, also made overland, was flown over an entirely different route showing that the Naval navigators were fully aware of the numerous landing places available. Another factor of considerable importance is that the landings at the termination of both flights were made at night without any elaborate preparation such as is necessary for the usual landplane landing.

Commercial operation of land transports has meant that a great deal of money, time and effort has been spent in their development. Consequently the development of landplanes has preceded that of flying boats by a considerable margin. Only recently have flying boats begun to have the clean strutless appearance that landplanes have shown for the past eight years. Flying boats have more or less copied the developments that were demonstrated on landplanes. Although this is still being done, the gap between the developments is rapidly closing. Whether or not flying boats will attain the practical speed of landplanes is still a moot question, however, it is becoming evident



that flying boats are likely to far outstrip landplanes in load carrying capacity which is equally as important as speed. The superior load carrying capacity of flying boats is due to the fact that large take-off areas which are necessary for highly loaded aircraft, are already available. We do not have to wait for the development of suitable airports before we can increase the load carrying efficiency of flying boats.

This situation has not just occurred. The opportunity to operate flying boats commercially without a great deal of airport preparation has existed all along. The point is that this opportunity still exists. There are many points which could be served by flying boats which can never afford to support an adequate flying field. Air transportation is still in its infancy and even though it has been growing by leaps and bounds, the next ten years will probably see undreamed-of expansion.

Nature has already provided the ground facilities for expansion of flying boat airways and whoever takes advantage of them is likely to profit thereby. Nature still prefers flying boats.

ASSOCIATED GLIDER CLUB

THE December meeting at the La Jolla Grammar School was well attended. Nearly 50 persons enjoyed Col. Hoffman's moving pictures of parachutes and "Woody" Brown's colored movies of gliding and surfing. Plans for the New Year's Meet at Torrey Pines were discussed and invitations have been sent to the Los Angeles clubs.

Jay Buxton's 2-place "Transport," Sandborn's 2-place "Grunau," Bowlus with his "Albatross," and Stevens with his "Ross-Stevens Special," which won laurels at Elmira last year, have promised to attend. Competitions for distance soaring will depend on the wind, but in any event there will be duration flights, spot landing contests and motorless aerobatics, and passenger flights will be featured thru the three days of the meet, December 31, January 1st and January 2nd.

The field is located on Torrey Pines Mesa, one mile north of Scripps Institute and is easily reached by auto or plane.

Jerry Litell,
Mach. Shop Inspection.

Live and Learn!

In view of the recent interest in just how old a pilot must become before he "loses his grip", the following note from a report on the effect of high altitude flying is interesting: "Tests have also indicated that older aviators, that is those over 45 years of age, have shown relatively few symptoms from the effects of altitude alone. Older subjects studied showed more stable cardio-vascular responses to oxygen deprivation or altitude than the younger ones and in general were less susceptible to collapse or fainting. In this connection, it is also desired to point out one airline has recently found thru tests that pilots of this age appear to be less susceptible to fatigue after prolonged flights."

"It's just ten years this Christmas since my wife went out to buy a loaf of bread, and she has never come back," said the old fellow sadly. "What do you think I ought to do?" With deep sympathy his boyhood buddy replied, "Guess ye'll jest have to go out and buy one yourself, Jim."